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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,735	11/24/2003	Michael L. Regal	002-32: CSN 7266	7283

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EXAMINER	
YUEN, KAN	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/722,735	REGAL, MICHAEL L.	
	Examiner	Art Unit	
	Kan Yuen	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/18/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Claim Objections

1. Claims 1, 2, 3, 6, 7 and 11are objected to because of the following informalities:

In claim 1, line 21, the term "a position command", seems to refer back to the same term in line 19. If this is true, it is suggested to change the term "a position command" to "the position command". Appropriate correction is required.

In claim 3, line 8 and 20, the abbreviated terms "INIT" and "LINK" respectively, should be spelled out.

In claim 6, lines 12, the term "vale", should be spelled as "value". Similar problem exist in claim 11.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 6-7 and 11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 6-7 and 11 lack the proper preamble for a computer readable medium claim. This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter. Correction is required. An example of an acceptable preamble for a computer type claims is "A computer readable

medium encoded with a computer executable instructions, the instructions comprising". For further information on statutory computer type claims, see MPEP section 2100.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Habeck et al. (Pat No.: 5684789).

In claims 1 and 6, Habeck et al. disclosed the method of at the start-up device: transmitting a transmitted position command having a device number field holding an initial value; receiving a received position command having a device number field holding a received value (Habeck et al. see fig. 1, boxes 50, 52, 54, 56, 58, and see column 5, lines 30-50). As shown in the reference, the controller sends an initial command signal to switch box 50, and the switch box set its own ID in the command signal as the initial value. In this case, the controller is the start-up device, and the switch boxes are the linked devices; indicating that all links are good if the received value is equal to an expected value (see column 4, lines 8-20). If the command is received back by the controller, it knows that all switch boxes are properly functioned; indicating that a link is bad if the received value is not equal to the expected value and indicating the location in the ring of a bad link based on the difference between the

received value and the expected value (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefore the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command; at a linked device: incrementing a value held in the device number field of a received position command to form an incremented value and transmitting a modified position command having a device number field holding the incremented Value if a position command is received (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefor the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command; and transmitting a position command having a device number field holding the initial value if no valid position command is received (see column 5, lines 45-60, and see fig. 9). A switch box compares its ID with the ID in the received command. If it does not match, it will forward the command to next switch box. Therefore, can interpret that command not match with switch box is the no valid position command.

Regarding to claims 2, 5 and 7, Habeck et al. also teaches the method of reading the Storage device to read a platform value indicating the number of devices in the ring (see column 6, lines 1-10); and comparing the received value to the platform value to determine the location of a defective link (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its

own Ids to the command; therefore the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command.

Regarding to claim 4, Habeck et al. also teaches the method of a start-up device including: means for transmitting a position command having a device number field holding an initial value; means for receiving a received position command having a device number field holding a received value; (Habeck et al. see fig. 1, boxes 50, 52, 54, 56, 58, see column 1, lines 53-67, and see column 5, lines 30-50). As shown in the reference, the controller sends an initial command signal to switch box 50, and the switch box set its own ID in the command signal as the initial value. In this case, the controller is the start-up device, and the switch boxes are the linked devices; means for indicating that all links are good if the received value is equal to an expected value (see column 4, lines 8-20). If the command is received back by the controller, it knows that all switch boxes are properly functioned; means for indicating that a link is bad if the received value is not equal to the expected value and indicating the location in the ring of a bad link based on the difference between the received value and the expected value (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefore the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command; a linked device including: means for incrementing a value held in the device number field of a received position command to form an incremented value and transmitting a modified position command having a device number field holding the incremented value if a position command ,is received (see

column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefor the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command; and means for transmitting a position command having a device number field holding the initial value if no position command is received (see column 5, lines 45-60, and see fig. 9). A switch box compares its ID with the ID in the received command. If it does not match, it will forward the command to next switch box. Therefore, can interpret that command not match with switch box is the no valid position command.

Regarding to claim 8, Habeck et al. also teaches the method of a start-up device including: a management interface having a transmitter and a-receiver; and a controller coupled to the transmitter to transmit a position command having a position field holding an initial value and coupled to the receiver to receive a position command having a position field holding a received value, where the controller compares the received value to an expected value, indicates that all links are good if the received value is equal to the expected value, indicates that a link is bad if the received value is not equal to the expected value and determines the location of a bad link based on the difference between the received value and the expected value (Habeck et al. see fig. 1, boxes 50, 52, 54, 56, 58, see column 1, lines 53-67, and see column 5, lines 30-50). As shown in the reference, the controller sends an initial command signal to switch box 50, and the switch box set its own ID in the command signal as the initial value. In this case, the controller is the start-up device, and the switch boxes are the linked devices. Each

switch box has inputs and output, which can be interpreted as transmitter and receiver. Also see paragraphs (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefore the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command; a linked device including: a management interface having a transmitter and a receiver; and a management interface controller coupled to the receiver to receive a position command from the first upstream device having a position field holding a received value, where the controller increments the received value to generate an incremented value and with the controller coupled to the transmitter to transmit a modified position command having a position field holding the incremented value or, if no valid position command is received, the controller transmits a Position command having a position field holding the initial value (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefor the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command; Also see paragraphs (see column 5, lines 45-60, and see fig. 9). A switch box compares its ID with the ID in the received command. If it does not match, it will forward the command to next switch box. Therefore, can interpret that command not match with switch box is the no valid position command.

Regarding to claim 9, Habeck et al. also teaches the method of transmitting a transmitted position command having a device number field holding an initial value; receiving a received position command having a device number field holding a received

value (Habeck et al. see fig. 1, boxes 50, 52, 54, 56, 58, see column 1, lines 53-67, and see column 5, lines 30-50). As shown in the reference, the controller sends an initial command signal to switch box 50, and the switch box set its own ID in the command signal as the initial value. In this case, the controller is the start-up device, and the switch boxes are the linked devices; indicating that all links are good if the received value is equal to an expected value (see column 4, lines 8-20). If the command is received back by the controller, it knows that all switch boxes are properly functioned; and indicating that a link is bad if the received value is not equal to the expected value and indicating the location in the ring of a bad link based on the difference between the received value and the expected value (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefore the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command.

Regarding to claim 10, Habeck et al. also teaches the method of a start-up device including: means for transmitting a position command having a device number field holding an initial value; means for receiving a received position command having a device number field holding a received value (Habeck et al. see fig. 1, boxes 50, 52, 54, 56, 58, see column 1, lines 53-67, and see column 5, lines 30-50). As shown in the reference, the controller sends an initial command signal to switch box 50, and the switch box set its own ID in the command signal as the initial value. In this case, the controller is the start-up device, and the switch boxes are the linked devices; means for indicating that all links are good if the received value is equal to an expected value (see

column 4, lines 8-20). If the command is received back by the controller, it knows that all switch boxes are properly functioned; and means for indicating that a link is bad if the received value is not equal to the expected value and indicating the location in the ring of a bad link based on the difference between the received value and the expected value (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefore the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command.

Regarding to claim 11, Habeck et al. also teaches the method of a computer usable medium having computer readable program code physically embodied therein, said computer program product further comprising: computer program code executed by a controller on the start-up device to transmit a position command having a device number field holding an initial value; computer program code executed by a controller on the start-up device to receive a position command having a device number field holding a received value (Habeck et al. see fig. 1, boxes 50, 52, 54, 56, 58, and see column 5, lines 30-50). As shown in the reference, the controller sends an initial command signal to switch box 50, and the switch box set its own ID in the command signal as the initial value. In this case, the controller is the start-up device, and the switch boxes are the linked devices; computer program code executed by a controller on the start-up device to indicate that all links are good if the received value is equal to an expected value (see column 4, lines 8-20). If the command is received back by the controller, it knows that all switch boxes are properly functioned; and computer program

code executed by a controller on the start-up device to indicate that a link is bad if the received value is not equal to the expected value and indicating the location in the ring of a bad link based on the difference between the received value and the expected value (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefore the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command.

Regarding to claim 12, Habeck et al. also teaches the method of a start-up device including: a management interface having a transmitter and a receiver; and a controller coupled to the transmitter to transmit a position command having a position field holding an initial value (Habeck et al. see fig. 1, boxes 50, 52, 54, 56, 58, see column 1, lines 53-67, and see column 5, lines 30-50). As shown in the reference, the controller sends an initial command signal to switch box 50, and the switch box set its own ID in the command signal as the initial value. In this case, the controller is the start-up device, and the switch boxes are the linked devices. Each switch box contains input (receiver) and output (transmitter); and coupled to the receiver to receive a position command having a position field holding a received value, where the controller compares the received value to an expected value, indicates that all links are good if the received value is equal to the expected value (see column 4, lines 8-20). If the command is received back by the controller, it knows that all switch boxes are properly functioned, indicates that a link is bad if the received value is not equal to the expected value and determines the location of a bad link based on the difference between the

received value and the expected value (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefore the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command.

Claim Rejections - 35 USC § 103

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Habeck et al. (Pat No.: 5684789), in view of Brown et al. (Pat No.: 4860284).

For claim 3, Habeck et al. teaches the method of at the start-up device: starting a timer; transmitting an INIT command having a device number field holding an initial value; (Habeck et al. see fig. 1, boxes 50, 52, 54, 56, 58, see column 4, lines 8-20 and

see column 5, lines 30-50). As shown in the reference, the controller sends an initial command signal to switch box 50, and the switch box set its own ID in the command signal as the initial value. In this case, the controller is the start-up device, and the switch boxes are the linked devices. If the controller had not received the command back after a reasonable time, it knows that a fault switch in the network; indicating that all links are good if the timer has not expired and if an INIT command is received (see column 4, lines 8-20). If the command is received back by the controller, it knows that all switch boxes are properly functioned; if the timer has expired and no INIT command is received: storing a received link number field (see column 6, lines 1-10); indicating the existence of a bad link (Habeck et al. see fig. 1, boxes 50, 52, 54, 56, 58, see column 4, lines 8-20 and see column 5, lines 30-50). As shown in the reference, the controller sends an initial command signal to switch box 50, and the switch box set its own ID in the command signal as the initial value. In this case, the controller is the start-up device, and the switch boxes are the linked devices. If the controller had not received the command back after a reasonable time, it knows that a fault switch in the network; and examining the link number field to determine the identity of the bad link (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefore the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command; at a linked device: incrementing a value held in the device number field in a received INIT command to form an incremented value and transmitting a modified INIT command having a device number field holding the incremented value if an INIT

command is received (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefor the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command; incrementing a value held in the link number field of a received LINK command to form an incremented value and transmitting a modified LINK command having a link number field holding the incremented value if a LINK command is received (see column 4, lines 8-20, and see column 5, lines 30-50). Once the command circulated the loop, each switch boxes assigned its own Ids to the command; therefor the controller knows how many boxes are connected, and which box is not functioning by sending a reverse command; and transmitting a LINK command having a link number field holding the initial value if no valid INIT or LINK command is received (see column 5, lines 45-60, and see fig. 9). A switch box compares its ID with the ID in the received command. If it does not match, it will forward the command to next switch box. Therefore, can interpret that command not match with switch box is the no valid position command. However, Habeck did not explicitly disclose the method of if the timer has expired and no INIT command is received: storing a received link number field. Brown et al. from the same or similar field of endeavor teaches the method of if the timer has expired and no INIT command is received: storing a received link number field (see column 5, lines 1-20). In the reference, the current status of the signal is recorded on the timer expires. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Brown et al. in the network of Habeck et al.

The motivation for using the method as taught by Brown et al. in the network of Habeck et al. being that it registers the current status of the fault link, and the location of the fault link.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bhate et al. (Pat No.: 7113699), Kalman et al. (Pat No.: 6865149), Nagata et al. (Pat No.: 6269083), and Shiragaki et al. (Pub No.: 2004/0057375) are show systems which considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kan Yuen whose telephone number is 571-270-2413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER